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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,079	09/09/2003	Juzer Jangbarwala	434830-002	1434
27805	7590	09/15/2005	EXAMINER	
THOMPSON HINE L.L.P. 2000 COURTHOUSE PLAZA , N.E. 10 WEST SECOND STREET DAYTON, OH 45402			ZHENG, LOIS L	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/658,079

Applicant(s)

JANGBARWALA, JUZER

Examiner

Lois Zheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-26,29,30 and 32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3-26,29,30 and 32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2 May 2005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Status of Claims*

1. Claims 2, 27-28 and 31 are canceled in view of the amendment filed on 24 June 2005. Claims 1 and 29-30 are amended in view of the amendment. New claim 32 is added in view of the amendment. Therefore, claims 1, 3-26, 29-30 and 32 remain under examination.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1 and 3-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, the amended feature of "said electric current resistively heats said catalyst, thereby increasing a temperature of said catalyst with respect to said support" as recited in instant claim 1 is not described in the original specification. Claims 3-26 are rejected since they depend on instant claim 1.

4. Claims 29-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

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had possession of the claimed invention. In this case, the amended feature of "said catalyst is locally heated with respect to said support" as recited in instant claim 29 is not described in the original specification. Claim 30 is rejected since they depend on instant claim 29.

5. Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, the claimed feature of "said electric current resistively heats said catalyst such that a temperature of said catalyst substantially increases with respect to said support" is not supported by the original specification.

Instant claim 32 is free of art rejection.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 1, 3-11, 17, 22-26 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe US 6,641,795 B2(Abe) in view of Puskas et al. US 4,415,479(Puskas).

The teachings of Abe and Puskas are discussed in paragraph 4 of the previous Non-Final Office Action dated 21 April 2005. The rejection ground for the instant claims are maintained for the same reason as stated in paragraph 4 of the previous Non-Final Office Action.

Regarding the amended feature in instant claim 1, as stated in paragraph 4 of the previous Non-Final Office Action, the catalyst support of Abe in view of Puskas is electrically conductive, which implies passing of current from the support to the catalyst. Therefore, the claimed electric current resistively heating the catalyst thereby increasing the catalyst temperature with respect to the support inherently takes place in the process of Abe in view of Puskas. Since the instant claim does not provide limitation to the temperature rise of the catalyst support, the instant claim does not preclude co-occurrence of thermal heating of the catalyst from the catalyst support.

Regarding the amended feature in instant claims 29-30, applicant's attention is directed to paragraph 9 of the instant specification on page 10, wherein the definition of "locally" is provided to mean "that heat is generated at the site of the catalyst where the heat is most useful in promoting the reaction". Since Abe in view of Puskas teach

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porous electrically heatable honeycomb structure on which catalysts are loaded(Abe, col. 9 lines 46-61 and col. 11 lines 42-60), the catalyst of Abe in view of Puskas covers the entire catalyst support. When the catalyst support is electrified, the claimed local resistive heating of the catalyst inherently takes place in the process of Abe in view of Puskas since the catalyst support is electrically conductive. Since the site of catalyst where the heating is most useful in promoting the reaction covers the entire catalyst support in the case of Abe in view of Puskas, the process of Abe in view of Puskas meets the limitation of locally heating the catalyst based on the definition of "locally" provided by the instant specification.

9. Claims 4 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Puskas, and further in view of Parmentier et al. US 6,383,972 B1 (Parmentier).

The teachings of Abe and Puskas are discussed in paragraph 4 of the previous Non-Final Office Action dated 21 April 2005. The teachings of Parmentier are discussed in paragraph 5 of the previous Non-Final Office Action. The rejection ground for the instant claims are maintained for the same reason as stated in paragraph 5 of the previous Non-Final Office Action.

10. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Puskas, and further in view of Colbert US 6,824,755 B2(Colbert).

The teachings of Abe and Puskas are discussed in paragraph 4 of the previous Non-Final Office Action dated 21 April 2005. The teachings of Colbert are discussed in paragraph 6 of the previous Non-Final Office Action. The rejection ground for the

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instant claims are maintained for the same reason as stated in paragraph 6 of the previous Non-Final Office Action.

11. Claim 1, 5, 23 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Affleck et al US 4,868,841(Affleck) in view of Puskas.

The teachings of Affleck and Puskas are discussed in paragraph 8 of the previous Non-Final Office Action dated 21 April 2005. The rejection ground for the instant claims are maintained for the same reason as stated in paragraph 8 of the previous Non-Final Office Action.

Regarding the amended feature in instant claim 1, as stated in paragraph 8 of the previous Non-Final Office Action, the catalyst support of Affleck in view of Puskas is electrically conductive(Affleck, abstract), which implies passing of current from the support to the catalyst. Therefore, the claimed electric current resistively heating the catalyst thereby increasing the catalyst temperature with respect to the support inherently takes place in the process of Affleck in view of Puskas. Since the instant claim does not provide limitation to the temperature rise of the catalyst support, the instant claim does not preclude co-occurrence of thermal heating of the catalyst from the catalyst support.

Regarding the amended feature in instant claims 29-30, applicant's attention is directed to paragraph 9 of the instant specification on page 10, wherein the definition of "locally" is provided to mean "that heat is generated at the site of the catalyst where the heat is most useful in promoting the reaction". Since Affleck in view of Puskas teach an electrically conductive support coated with catalysts(Affleck, abstract), the catalyst of

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Affleck in view of Puskas covers the entire catalyst support. When the catalyst support is electrified, the claimed local resistive heating of the catalyst inherently takes place in the process of Affleck in view of Puskas since the catalyst support is electrically conductive. Since the site of catalyst where the heating is most useful in promoting the reaction covers the entire catalyst support in the case of Affleck in view of Puskas, the process of Affleck in view of Puskas meets the limitation of locally heating the catalyst based on the definition of "locally" provided by the instant specification.

### ***Response to Arguments***

12. Applicant's arguments filed 24 June 2005 have been fully considered but they are not persuasive.

In the remarks, applicant argues that Abe and/or Puskas reference are not obvious since Abe and/or Puskas do not teach that the catalyst is locally activated. The examiner does not find the argument persuasive based on the definition of "locally" provided by the specification of the instant invention as discussed in paragraphs 6 and 9 above in the rejection of amended features of instant claims 29-30.

In addition, applicant's argument that the catalyst of the instant invention is heated on a local level without substantially increasing the temperature of the catalyst support is not described in the specification of the instant invention.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LLZ

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